

IN THE SPECIFICATION

Please replace the paragraph beginning on page 2, line 26, with the following replacement paragraphs:

The manufacture of disks 10 and 20 is a cumbersome and expensive process. Disk 10 requires two molding steps, and disk 20 requires four molding steps. This is a significant problem inasmuch as molding capacity is at a premium. Another problem is that the laser beam must traverse a 600 μm polycarbonate substrate to read from or write to one of the data layers and a 600 μm polycarbonate substrate and a 50 μm polymer resin layer to read from or write to the other data layer. This creates problems of aberration and wave front distortion, which make it difficult to maintain image quality. Moreover, these problems become more severe as the wavelength of the laser beam decreases. Since future generations of optical disks will likely be designed for shorter wavelength lasers which allow higher recording densities (e.g., a 400 nm blue laser), the structures shown in Figs. 1 and 2 do not offer much promise.

In accordance with known and prior art practice, each of the above-defined optical media can be further characterized as being second-surface media. In accordance with one definition, second-surface optical media can be defined in terms of the read operation that is conducted when reading information from the media. In particular, a second-surface optical medium can refer to a medium in which the read beam is incident on the substrate of the optical medium or disk before it is incident on the information layer.

The relatively thick and transparent substrate of second-surface optical media makes read-only or read-write operations relatively insensitive to dust particles, scratches and the like which are located more than 50 wavelengths from the information layer. While the relatively thick substrate of second-surface optical media makes them relatively insensitive to dust or scratches, second-surface optical media can be relatively sensitive to various opto-

mechanical variations. For example, common opto-mechanical variations include: (1) tilt of the substrate relative to the optical axis; (2) substrate thickness variations; and/or (3) substrate birefringence.

These variations give rise to optical aberrations which degrade system performance arising from the presence of the relatively thick substrate and which can, at least theoretically, be partially compensated for by using a suitable optical path design. Such an optical path typically can only provide compensation for a single, pre-defined thickness of the substrate. Because there are likely to be variation in the thickness or other properties of the substrate, such compensation may be less than desired at some location of the medium.

Please replace the paragraph beginning on page 7, line 6, with the following replacement paragraph:

Although the well known plastic material "polycarbonate" has been used to illustrate the substrate 34 (for example the grade of polycarbonate called Lexan OQ™, available from GE Plastics), it can be readily appreciated that other "engineering grade" injection moldable plastics could be used for the substrate. An alternate material, for example, is Noryl™ plastic, also available from GE Plastics. More discussion of this subject is provided in Application No. 09/652,975, filed August 24 31, 2000, which is incorporated herein by reference in its entirety. A distinguishing advantage of this invention is that the substrate need not be substantially transparent to laser radiation and need not have low birefringence.

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